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SUMMARY

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SIMPLE DEVICES FOR DEVELOPMENT PLANNING

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SIMPLE DEVICES FOR DEVELOPMENT PLANNING

by Jan Tinbergen, Professor in Development Planning and Mathematical Economics at the Netherlands School of Economics.

1. Introductory.

This paper lists a number of devices for the construction of a development plan. Together they are a complete set of activities to arrive at such a plan. They do not represent the most sophisticated methods known to the author but rather the most practical ones. The resulting method of planning is one of successive approximations. Each of the following sections may be considered a phase or a stage of the process.

2. Macro-economic Estimates.

To begin with, estimates are made on the most desirable time path of total national product or income, total savings and total investment. The essence of this problem is to find the optimum savings ratio. The consequences of a given savings level can be estimated using a constant capital-output ratio or production functions. Economic science is not able to guide governments in the evaluation of alternative time patterns of the development of income and consumption.

3. Sector Planning.

The next set of problems refers to the prospective development of demand in a number of sectors. Consumer demand is estimated from the planned development of income and from expected population figures. Demand for investment goods can be subdivided into demand for, say, buildings, for equipment and for increases in stocks, if we have some initial figures and assume proportional increases. Export demand may be estimated with the aid of the principles used for estimating consumer demand.

Having estimated the demand for finished goods we can now estimate the necessary development of production of intermediate goods and raw materials with the aid of input-output coefficients.

A second approximation of the investment programme can be made using capital-output ratios, gestation periods and the desired increases in production in all sectors.

Among the sectors considered we may also include some educational and other social activities. Some sectors will be producing "national goods", i.e., goods which cannot be exported or imported. Changes in structure concern changes

in "international sectors", producing goods which can be imported or exported.

4. Project Appraisal.

The appraisal of investment projects involves the preparation of figures describing the inputs and outputs of each project, both during the investment period and during the operation period. Those figures must describe all "relevant features", i.e. the contributions made to the aims of development policy and the use made of the country's scarce resources. The units of the investment programme to be selected are suggested to consist, each of them, of one project in an international sector plus a set of complementary investments in the national sectors. If the markets are not in equilibrium, accounting or shadows prices have to be used to evaluate scarce factors and products.

5. Regional Programmes.

The aims of the regional development policy have to be known. A distinction is made between "shiftable" and "non-shiftable" projects. The former can be carried out in several, if not all regions, without changing their contribution to national aims. The latter can only be carried out in one region (or a few regions). The projects have to be selected according to the needs of the regions.

6. Assumption about Prices.

Prices are as a rule supposed to remain constant. In some cases this assumption is not permitted. A distinction has to be made between external price changes and changes in prices which are necessary as a consequence of some features of the plan.

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